

**APPARATUS AND METHOD FOR PERFORMING FORWARDING  
TABLE SEARCHES USING CONSECUTIVE SYMBOLS TABLES**

**ABSTRACT OF THE DISCLOSURE**

A routing table search circuit for determining a first destination address for a first received data packet. The routing table search circuit comprises: i) a forwarding table containing destination addresses; and ii) a trie tree search table for translating an address portion of the first received data packet into a destination pointer for accessing the first destination address in the forwarding table. A first stage of the trie tree search table is searched using a received address pointer from a previous stage of the trie tree search table and a first m-bit symbol of the address portion. The routing table search circuit also comprises at least one consecutive symbols table and a control circuit for determining that a second consecutive m-bit symbol is the same as the first m-bit symbol. The control circuit then determines a total number of consecutive identical m-bit symbols beginning with the first m-bit symbol.